Cotton/Soybean Insect Newsletter

Volume 16, Issue #8 Edisto Research & Education Center in Blackville, SC 18 June 2021

Pest Patrol Alerts

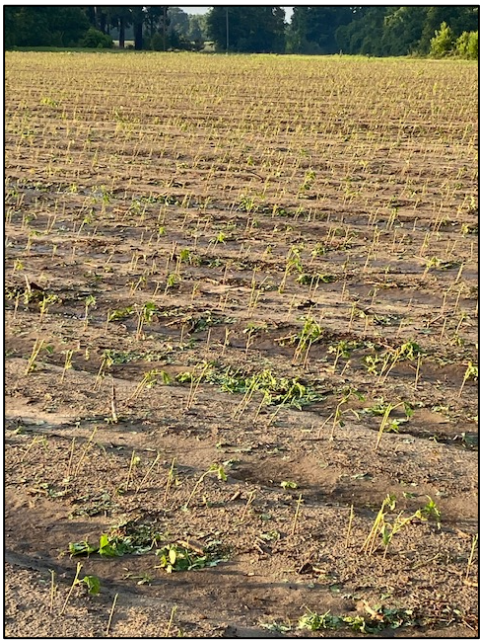
The information contained herein each issue is available via text alerts that direct users to online recordings. I will update the short message often for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter "y" to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

Updates on Twitter

When noteworthy events happen the in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at **@bugdocisin** on Twitter.

News from Around the State

Drake Perrow, crop consultant and producer in Cameron, SC, reported seeing spider mites in cotton this week. **Jonathan Croft**, county agent in Orangeburg County, reported receiving a call on grasshoppers in soybeans this week and severe hail damage to cotton and soybeans near Elloree, Santee, and Holly Hill. **Charles Davis**, county agent in Calhoun County, also reported hail and wind damage in his county. Here are some photos he provided showing an irrigation system turned over and hail/wind damage.


Scouting Workshops and Field Days

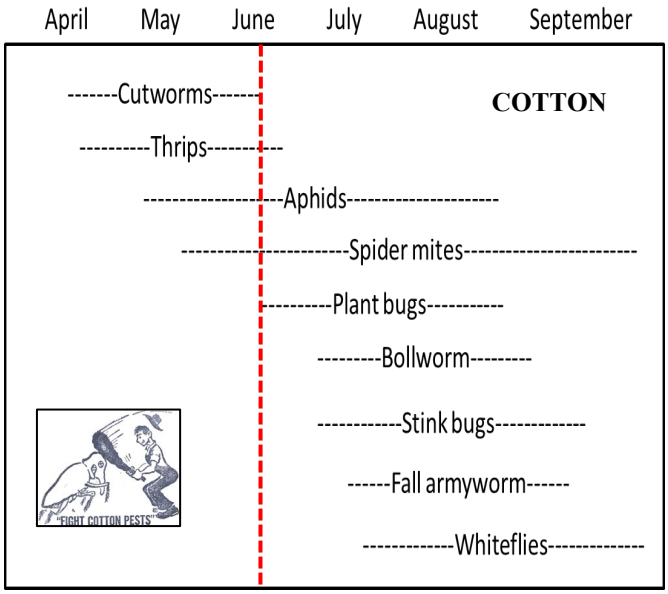
We will offer several in-field, in-person workshops devoted to scouting for insect issues in cotton and soybeans in 2021. These scouting workshops will likely be on 28 July (Manning or Sumter area), 29 July (Cameron), and on 30 July (Edisto REC in Blackville), so please hold the date for your area, if you would like to attend. We will also have an in-person field day here at the Edisto REC on 2 September 2021, with at least row crops (cotton, soybeans, peanuts, corn, grain sorghum, etc.) covered. Stay tuned for details on those events.

Cotton Situation

As of 13 June 2021, the USDA NASS South Carolina Statistical Office estimated that about 95% of the crop has been planted, compared with 90% at this time last week, 89% at this time last year, and 94% for the 5-year average. About 10% of the crop is squaring, compared with 0% last week, 13% at this time last year, and 12% for the 5-year average. The conditions of the crop were 10% excellent, 60% good, 18% fair, 11% poor, and 1% very poor. These are observed/perceived state-wide averages.

Cotton Insects

As some of our crop is now squaring and growing rapidly, we will start to see populations of plant bugs increase. Plant bugs will include several species, such as the tarnished plant bug, *Lygus lineolaris*, the clouded plant bug, *Neurocolpus nubilus*, and the cotton fleahopper, *Pseudatomoscelis seriatus*. The plant bug species of most concern in the Coastal Plain of SC is the tarnished plant bug. Most of the clouded plant bugs I have observed were in the Upstate area of SC, as I have not observed many in cotton in the Coastal Plain counties. Cotton fleahoppers are widely distributed but rarely an issue, unless large populations develop on a wild host, such as cutleaf evening primrose, and move into young cotton nearby. These three species comprise a complex of bugs that can feed on pre-floral buds (squares), blooms, and small bolls. Some photos of these species are on the bottom of the next page. Treatment thresholds are as follows:

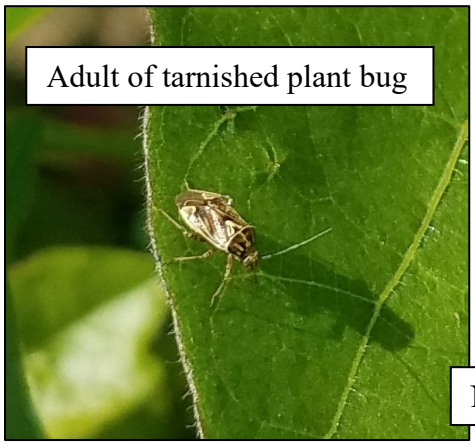


Plant-bug injury to squares infrequently cause problems in SC, but an economic problem could develop if an early-maturing variety was planted late, an average of 3 plant bugs per 6 rowft is detected using a beat cloth or beat pan, an average of 1 plant bug per 10 sweeps is found, and/or 25% or more of pinhead squares have been lost due to plant bug injury. Cotton in SC is most susceptible *to plant bugs around the time of first bloom (a couple of weeks on each side of first bloom). Pyrethroid insecticides can provide suppression of plant bugs*

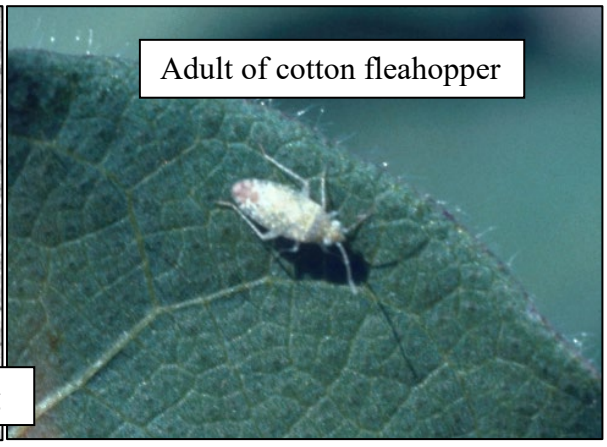
when applied at stink bug/bollworm control rates. Avoid treating Bt cotton for plant bugs unless absolutely necessary in June and July as subsequent reductions in beneficial populations often trigger problems with bollworm or fall armyworm. Plant bugs can also injure small bolls like stink bugs. For combinations of plant and stink bugs feeding on small bolls, use boll-injury treatment thresholds for stink bugs. Insecticides recommended for control of plant bugs are listed below, but some are better than others. For example, Belay is a great product for control of TPB, but it cannot be used after pinhead square. Diamond works only on immature plant bugs and not on adults, so it needs to be mixed with a material that controls adults. Imidacloprid can be weak on TPB, and acephate and Bidrin will kill many beneficials.

PLANT BUGS

Product	Product/acre	Lb ai/acre	Acre/gal	REI	PHI	Comments
sulfoxaflor Transform 50 WG	 1.5-2.25 oz	0.047-0.071	 -	24 hr	14 d	
acephate Orthene/Acephate 97 Orthene/Acephate 90	 4.1-12.3 oz 4.4-13.3 oz	0.25-0.75	 - -	24 hr	21 d	
imidacloprid Alias 4 F Alias 2 F Admire Pro 4.6	 1.5-2.0 oz 3.0-4.0 oz 0.9-1.7 oz	0.031-0.0625	 64-83 32-42.6 75-142	12 hr	14 d	
thiamethoxam Centric 40 WG	 2.0-2.5 oz	0.05-0.0625	 -	12 hr	21 d	5 oz limit for season
dicrotophos **(R)** Bidrin 8 E	 4.0-8.0 oz	0.25-0.5	 16-32	6 d	30 d	16 oz limit post bloom
oxamyl **(R)** Vydate 3.77 CLV	 8.5-17.0 oz	0.25-0.5	 7.5-15	48 hr	14 d	
clothianidin Belay 2.13	 3.0-5.0 oz	0.05-0.083	 25.6-42.6	12 hr	Pinhead square	1 application for season
novaluron Diamond 0.83 EC	 9.0-12.0 oz	0.058-0.078	 14.2-21.3	12 hr	30 d	Effective on nymphs only


Adult of tarnished plant bug


Nymph of clouded plant bug


Adult of cotton fleahopper

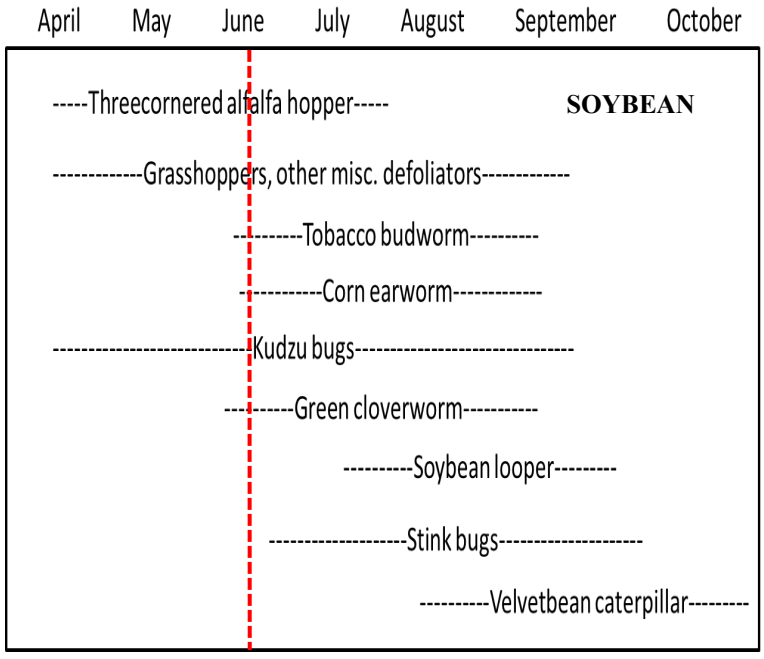
We will talk more about plant bugs next week. Any aphids that build in cotton are the cotton or melon aphid, *Aphis gossypii*, as other species rarely colonize cotton. This species can transmit the Cotton Leafroll Dwarf Virus (CLRDV) that we have been following. So far, this disease has not caused widespread problems in the Southeast, and only isolated issues have been identified. We will continue to follow this vector/virus combination and let you know if data indicate we have more to be concerned about – you have enough to worry about now, so don't worry about this one. Continue to watch aphids, and only spray to control them, if the stress is just too much on the plant (i.e. you have young, infested plants that will undoubtedly be stunted if aphids are not controlled; or, you have a drought-stressed crop that is hurting, and you can control a large population of aphids and remove one of the stressors, etc.). We have good insecticides for aphids, but the big question is whether or not we need to spray for them. Aphids are good prey items for beneficial arthropods to eat and build up populations of the "good guys" in the field. Regularly, we get a naturally occurring fungal organism, *Neozygites fresenii*, that wipes out aphids in days, leaving a robust army of natural enemies ready to take on bollworm eggs and larvae. So, manage the insects in your field wisely. Some of the subeconomic pests we can tolerate and benefit from later in the season.

Soybean Situation

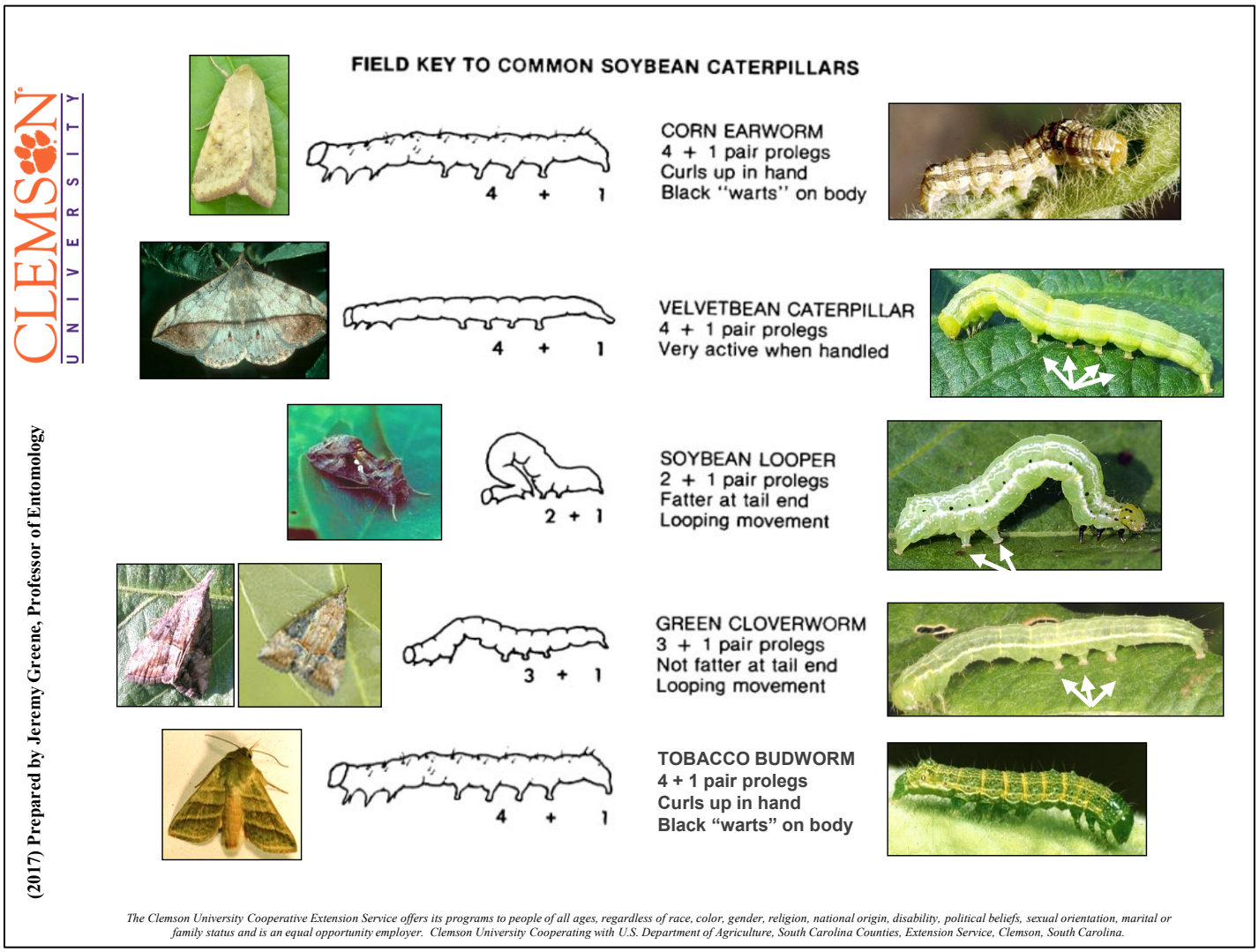
As of 13 June 2021, the USDA NASS South Carolina Statistical Office estimated that about 89% of the crop has been planted, compared with 83% the previous week, 65% at this time last year, and 71% for the 5-year average. About 82% of the crop has emerged, compared with 70% the previous week, 50% at this time last year, and 53% for the 5-year average. The conditions of the crop were 9% excellent, 72% good, 14% fair, 3% poor, and 2% very poor. These are observed/perceived state-wide averages.

Soybean Insects

All is still good in soybeans at this point. A few calls about grasshoppers are all that we have right now regarding issues with insects in the crop. Continue to monitor stands and loss of foliage to grasshoppers. We can stand considerable loss of foliage (at least 30%) before bloom without a loss of yield. If clear problems with grasshoppers are identified, use heavy rates of insecticides (a pyrethroid, acephate, or chlorpyrifos) for adults, and consider using Dimilin at 2 fl oz/acre where you have noticeable reproduction and many grasshopper nymphs (no wings) jumping around. The rains we recently received will result in hatchouts of grasshopper immatures that will likely cause another round of problems.

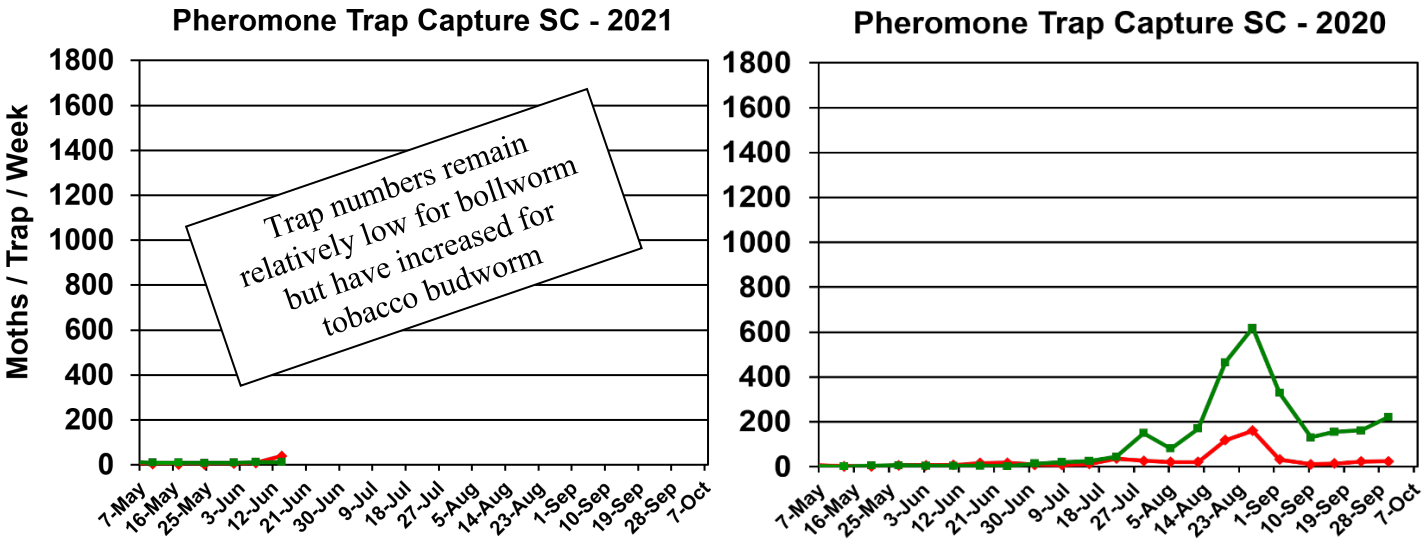


We are also moving into the part of the season when moth activity will start to pick up, and eggs will yield caterpillar pests on soybeans. So, I will start stressing the importance of being able to identify the adults flying around in fields. Here is a chart to study for moth and caterpillar identification.

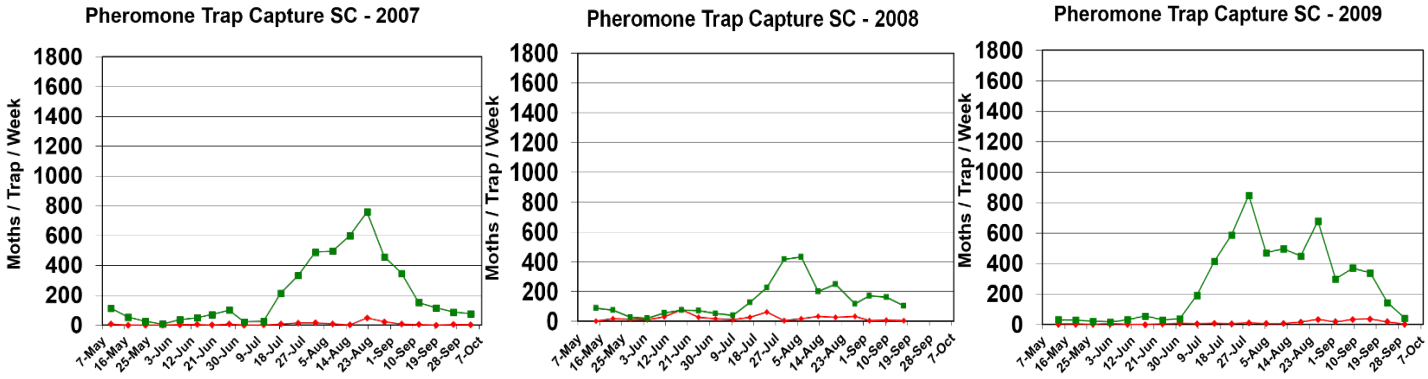


Bollworm & Tobacco Budworm

Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2020 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.



Trap data from 2007-2019 are shown below for reference to other years of trapping data from EREC:



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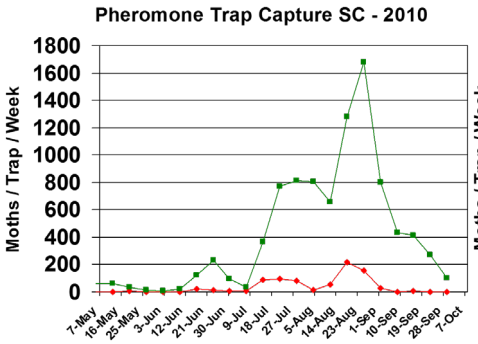
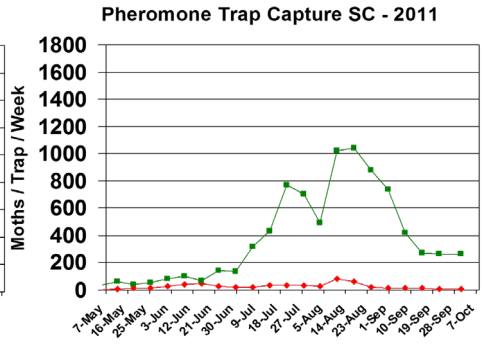
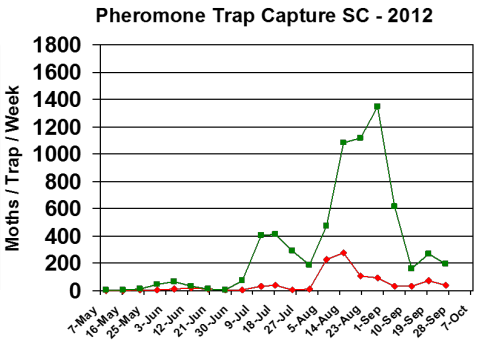
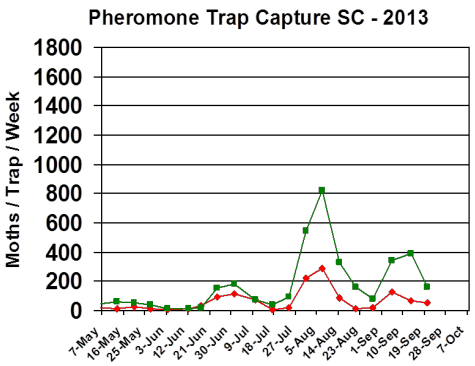
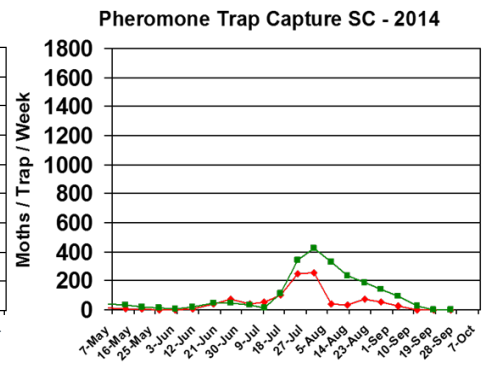
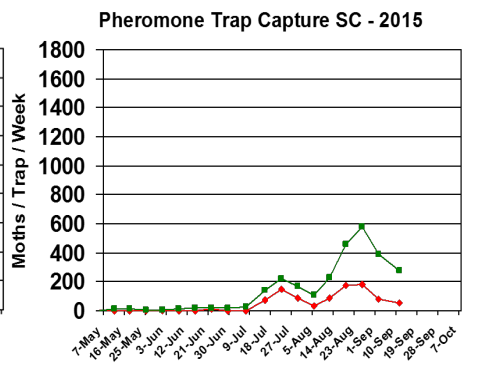


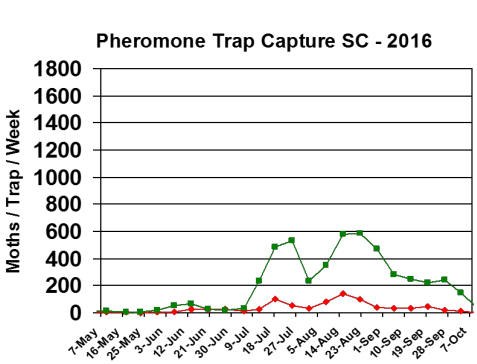


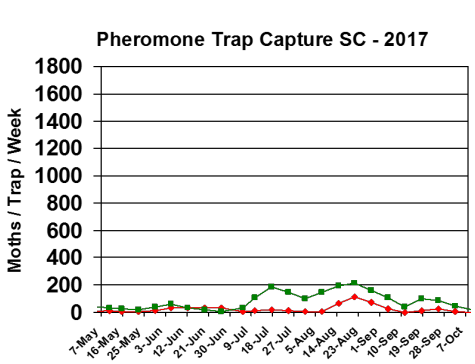


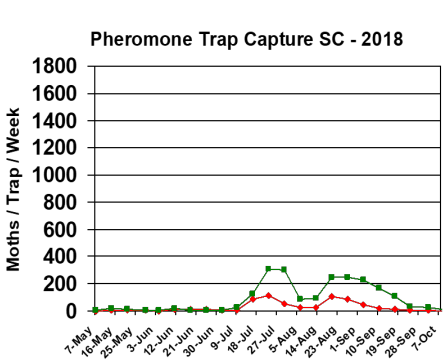


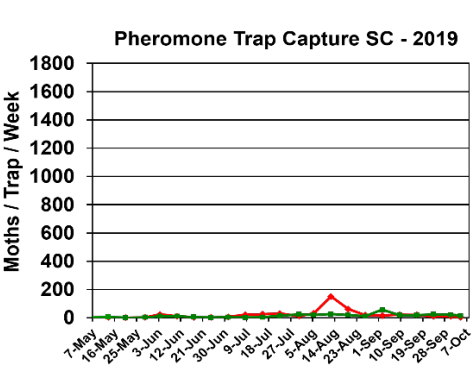








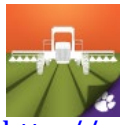




Pest Management Handbook – 2021

Insect control recommendations are available online in the 2021 South Carolina Pest Management Handbook at:
https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html

Free Mobile Apps: "Calibrate My Sprayer" and "Mix My Sprayer"



Download our free mobile apps called "Calibrate My Sprayer" and "Mix My Sprayer" that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):
http://www.clemson.edu/extension/mobile-apps/

Need More Information?

For more Clemson University Extension information: http://www.clemson.edu/extension/

For historical cotton/soybean insect newsletters:
https://www.clemson.edu/extension/agronomy/cotton1/newsletters.html

Sincerely,

Jeremy K. Greene, Ph.D.
Professor of Entomology

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